

A rapid bird survey of the Menyapa mountains, East Kalimantan, Indonesia

NICK W. BRICKLE, JAMES A. EATON and FRANK E. RHEINDT

We report on a rapid bird survey in the Menyapa Mountains of East Kalimantan Province, Indonesia. Six days were spent at altitudes of between 150 m and 1,600 m during November 2007. A total of 184 species were recorded including one new species for Kalimantan, one new for Indonesia, and several range extensions, highlighting the interest and importance of the Menyapa region. The status, distribution and taxonomy of several montane species are discussed in general, including species both detected and undetected by this survey.

INTRODUCTION

Ornithological survey work in Kalimantan has been far less extensive than in neighbouring Sabah and Sarawak (Sheldon *et al.* 2001, Mann 2008). This is particularly so for upland areas. Here we report on a rapid survey of one such area, the Menyapa Mountains of East Kalimantan Province, Indonesia. We extend our findings to consider the distribution and taxonomy of some montane species in general.

Survey area

The Menyapa Mountains are a range of mid-elevation hills (maximum 2,130 m) some 300 km north of Balikpapan and 150 km east of the Sarawak border, lying entirely within the Indonesian province of East Kalimantan (Figure 1). The forested hills above around 500 m are designated as a mix of watershed protection forest (*'Hutan Lindung'*) and an inactive logging concession owned by PT Muggitriman. There is no history of commercial logging, and illegal logging has been very limited as a result of the

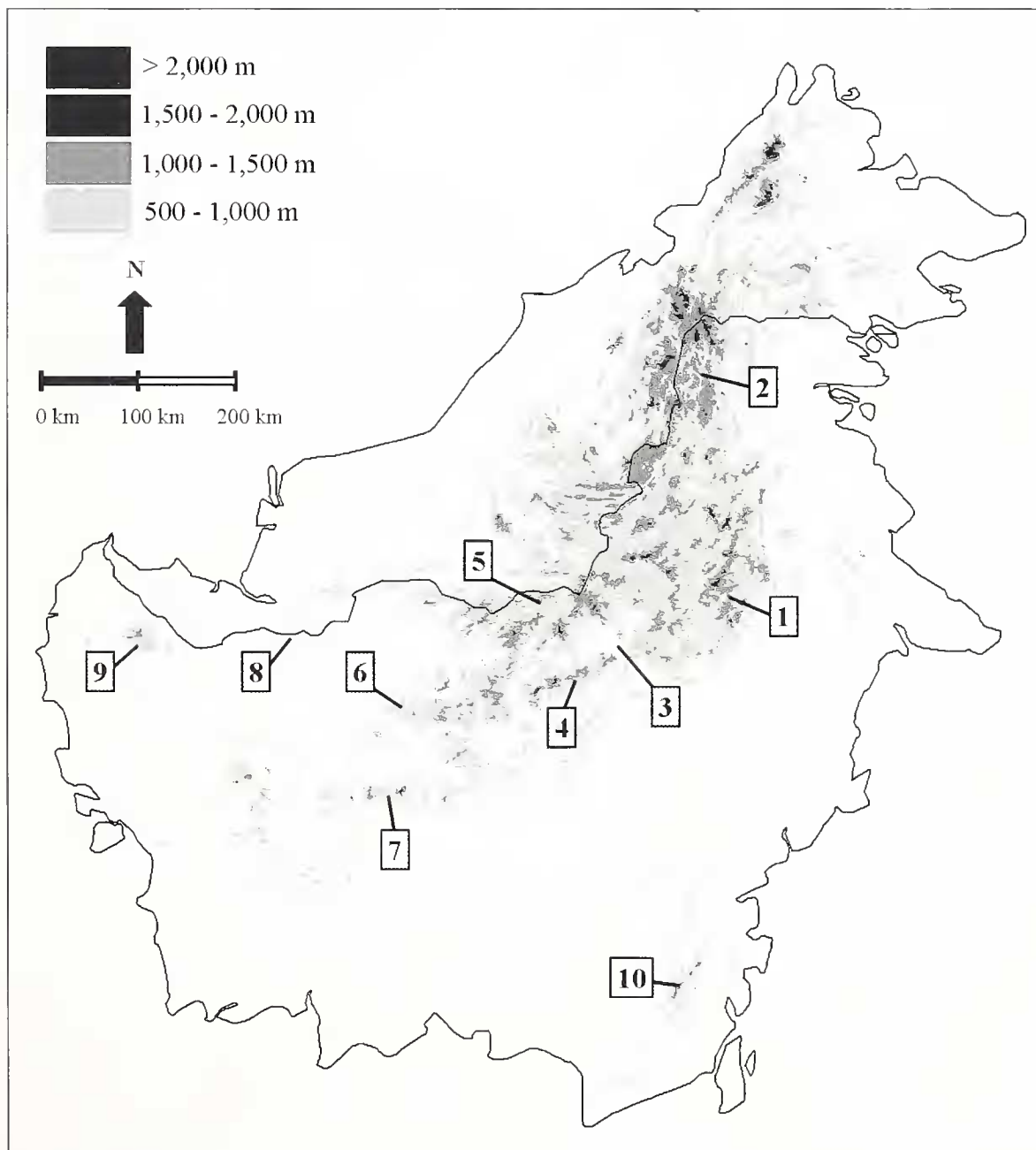


Figure 1. Topography of Borneo, showing broad elevational bands. Numbers indicate locations referred to in the text: (1) Menyapa Mountains; (2) Kelabit Uplands and Kayan Mentarang; (3) Upper Mahakam; (4) Müller Range and Barito Ulu; (5) Batu Tibang; (6) Mt Kenepai; (7) Bukit Baka; (8) Liang Kubung; (9) Mt Nyiut; (10) Muratus/Meratus Range.

poor access. Gaharu wood (agarwood) collectors are active in the area but the scale is small and any damage is very localised. Generally the forest throughout the Menyapa range is in excellent condition.

Lowland areas to the west and east are dominated by land designated as logging concession or industrial plantation. Forest exploitation is very advanced to the east, with the active logging concession of PT Nakarta Rimba working into the foothills of the Menyapa Mountains, and beyond this huge oil palm estates now dominate the landscape. Land to the west is also designated as a logging concession, owned by PT Essam Timber, but this concession has never been actively exploited and the area remains largely intact forest.

Between 1996 and 2002 a road was constructed from the lowlands in the east to connect with the logging concession of PT Essam to the west of the Menyapa Mountains. This unsurfaced road stretched over 150 km across the Menyapa range and formed the most direct route to access and remove timber from the PT Essam concession. However, once opened it was found uneconomic to use the road as intended, and exploitation of the concession was abandoned almost before it began. The road was then cut off from vehicular access following a bridge collapse in 2005. However, three serviceable 4×4 cars were left behind and adopted by enterprising gaharu collectors. Both the cars and the road itself have been crudely maintained and are now used to ferry occasional teams of gaharu collectors to drop-off points from which they access the forest.

The Menyapa Mountains form part of the central mountainous region of the island of Borneo, but are isolated by land below 1,000 m from other adjacent ranges. To the north lie the Kelabit Uplands and Kayan Mentarang ranges that span the Kalimantan–Sarawak border. To the west lies the Batu Tibang range of East Kalimantan. To the south-west lies the Müller range (see Figure 1).

Previous ornithological survey work in the mountains of Kalimantan

To our knowledge, the closest previous ornithological surveys to the Menyapa Mountains were those conducted by H. C. Siebers in 1925, reported by Kloss (1930). Siebers collected above ‘Long Petah’ on the Telen river, which is probably in the vicinity of the current road-head near the logging concession of PT Nakarta Rimba on the route we took to access the Menyapa Mountains.

Ornithological survey work in other montane areas within Kalimantan is also sparse. To the west and south-west of Menyapa, previous survey work includes that reported by Büttikofer (1899), who visited Mt Kenepai (1,136 m) and nearby Liang Kubung (c. 1,200 m); Baron Victor von Plessen (reported in Stresemann 1938), who visited the upper Mahakam River region; Priemé & Heegaard (1988), who visited Mt Nyiut (‘Niu’; 1,000–1,500 m) in the far west of Kalimantan; Rice (1989), who produced some short notes on fieldwork at 1,600 m on Bukit Baka on the border of West and Central Kalimantan provinces; and Wilkinson *et al.* (1991a), who reported on bird surveys within the Barito Ulu region of north-central Kalimantan, although mostly under 800 m elevation. In the far south of Kalimantan, Davison (1997) reported on a survey of the isolated Muratus ranges (‘Meratus’; 1,300 m). To the north of Menyapa bird survey work has

been more extensive, particularly from the Kayan Mentarang ranges (1,500–1,900 m), including work by Pfeffer (1960–1961), van Balen & Aspinall (1996), van Balen (1997, 1999), van Balen & Nurwatha (1997) and Sebastian (2007). Beyond these surveys, there has been little other published work. A wealth of literature exists for montane areas in Sabah and Sarawak on the other hand, compiled and reviewed in Smythies (1999), Sheldon *et al.* (2001) and Mann (2008).

METHODS

Between 21 and 27 November 2007 JAE and NWB joined a survey team from The Nature Conservancy en route to the low-lying land to the east of the Menyapa Mountains to survey for the presence of Bornean Orang-utan *Pongo pygmaeus*. Data on bird species present were collected by direct observation and records of calling birds. No systematic or quantitative survey methods were used due to time and access constraints. Survey effort focused on the following areas, habitats and altitudes:

- degraded lowland forest (active logging concession), 200–500 m: 4 man-days;
- primary submontane forest, 500–1,500 m: 4 man-days;
- primary montane forest, 1,500–2,000 m: 4 man-days.

Bird names, sequence and species-level taxonomy generally follow Inskipp *et al.* (1996) except where more recent published information is available (taxa marked with *). IUCN Red List categories follow IUCN (2010).

RESULTS

A total of 184 species were recorded. Detailed accounts are given below for (a) threatened species (Endangered or Vulnerable by IUCN 2010); (b) species for which our records represent significant range extensions; and (c) species notable for other given reasons. An annotated list of all species recorded during the survey is given in the Appendix.

MOUNTAIN SERPENT EAGLE *Spilornis kinabaluensis*
Bornean endemic. Vulnerable. At least five birds were seen and sound-recorded at 1,300–1,650 m. This represents a notable southerly range extension for this species, with the only previous Kalimantan records from Kayan Mentarang (Voous 1961, van Balen 1999, Sebastian 2007).

WALLACE’S HAWK EAGLE *Nisaetus nanus*
Vulnerable. A single bird seen soaring above the Nakarta Rimba concession at around 150 m. This species is an uncommon but widespread resident in Kalimantan (Mann 2008).

FERRUGINOUS PARTRIDGE *Caloperdix oculea*
A pair was heard calling at around 350 m. Only a single Kalimantan record exists of this species, recorded at Mt Latuk within the Kayan Mentarang ranges (Pfeffer 1960–1961). Ferruginous Partridge also appears scarce in Sabah and Sarawak, with only an handful of previous records (Mann 2008).

RED-BREASTED PARTRIDGE *Arborophila hyperythra*

Bornean endemic. Regularly heard, and seen once, at 1,200–1,500 m. There are very few previous records of Red-breasted Partridge from Kalimantan, seemingly having only previously been recorded in Barito Ulu in northern Central Kalimantan (Wilkinson *et al.* 1991a) and in the Kayan Mentarang region (Finsch 1905, van Balen & Nurwatha 1997, Smythies 1999). The species's range in Sabah and Sarawak is relatively wide, stretching north from Barito Ulu as far as Mt Kinabalu (Mann 2008).

CRIMSON-HEADED PARTRIDGE *Haematortyx sanguiniceps*

Bornean endemic. Regularly recorded at 1,200–1,650 m. Few previous records from Kalimantan, mostly from the north-east, including the watersheds of Kapuas–Mahakam and Mahakam–Teweh (Smythies 1957) and the Kayan Mentarang ranges (Pfeffer 1960–1961, van Balen & Nurwatha 1997, Sebastian 2007).

CRESTED FIREBACK *Lophura ignita*

Near Threatened. A single male crossed the track at 200 m. Birds in the Menyapa Mountains belong to the nominate group, which consists of two Bornean races (*ignita* and *nobilis*) that differ only slightly in size (McGowan 1994). It is questionable to which of these two races Menyapa birds belong, because precise subspecies range limits in this part of Borneo are not clear. The nominate Bornean group differs greatly from Sumatran *L. i. rufa* and may well be split in the future, in which case the threat status of Bornean birds (*L. ignita sensu stricto*) will need to be re-assessed.

BULWER'S PHEASANT *Lophura bulweri*

Bornean endemic. Vulnerable. A male and three females crossed the track in the early morning at 1,100 m. Local gaharu collectors knew this species well, suggesting it is regular in the area. This species is an uncommon submontane resident with a patchy distribution across central Borneo (Mann 2008).

BARRED EAGLE OWL *Bubo sumatranus*

Heard calling nightly at around 1,600 m. Three of the five previous Kalimantan records of this species have been from lowland sites, including the Sangkulirang Peninsula (Eames 2005) and Sungai Wain (Slik & van Balen 2006) in east Kalimantan, and Tanjung Puting National Park in south-central Kalimantan (Bohap & Galdikas 1987, Nash & Nash 1988). Only Büttikofer (1899) and Sebastian (2007) recorded Barred Eagle Owl in upland habitat, at Liang Kubung and Kayan Mentarang respectively. In Sabah, Sarawak and Brunei this species is more widespread, but typically below 1,000 m (Mann 2008). Our record is notable, not least for its altitude.

MOUNTAIN SCOPS OWL *Otus spilocephalus*

Several heard at night above 1,100 m. Previously recorded from only two locations in Kalimantan: Kayan Mentarang (Robson 1993, van Balen 1997) and Gunung Liang Kubung in west Kalimantan (Banks 1937).

*GREY NIGHTJAR *Caprimulgus jotaka*

At least four birds were heard and seen at dawn and dusk at 1,100 m. This species is listed as occurring in Kalimantan by Andrew (1992) and Sukmantoro *et al.* (2007), although it is not clear where the record(s)

originate, as no reference is given and no record could be located. Additionally no records are listed for Kalimantan by Mann (2008). Grey Nightjar appears to be an uncommon winter visitor to Borneo, based on records from Sabah, Sarawak and Brunei, and so its presence in Kalimantan is not to be unexpected.

*BORNEAN FROGMOUTH *Batrachostomus mixtus*

Recorded at night once at around 1,100 m. Only a few Kalimantan records exist of this species: far to the south of Menyapa in the isolated Muratus Range (Davison 1997); 'Bahau' (Stresemann 1937); the Kayan Mentarang ranges (van Balen & Nurwatha 1997, Holmes 1997); and the Bulungan river in east Kalimantan, close to Menyapa (Stresemann 1937). This species is more commonly recorded from the far north of Borneo, in Sabah and northern Sarawak (Mann 2008).

*BORNEAN SWIFTLET *Collocalia dodgei*

Bornean endemic. *Collocalia* swiftlets were commonly encountered in the montane zone above 1,500 m and appeared to show green-glossed mantles. Moyle *et al.* (2008) showed that the island of Borneo harbours two *Collocalia* swiftlet species: (1) the widespread Glossy Swiftlet *C. esculenta* from the lowlands and foothills; and (2) the montane Bornean Swiftlet *C. dodgei*, a close relative of the better known Linchi Swiftlet *C. linchi* from Java. The two Bornean species closely resemble each other but differ in the colour of their plumage gloss (green in *C. dodgei*, blue in *C. esculenta*). *C. dodgei* has so far only conclusively been recorded from above 2,500 m on Mt Kinabalu (Sabah), but Moyle *et al.* (2008) suggested the species may be more widespread in suitable montane habitat throughout the island. Our record of green-glossed birds above 1,500 m suggests that *C. dodgei* occurs south to the Menyapa Mountain range in Kalimantan. Future confirmation of our record with photographs or specimen collection is desirable, not least to establish the reliability of mantle colour as an identification feature.

WHITE-THROATED NEEDLETAIL *Hirundapus caudacutus*

A small party of six birds was seen above the PT Nakarta Rimba logging concession at around 200 m. This species is listed as occurring in Kalimantan by Andrew (1992) and Sukmantoro *et al.* (2007), although it is not clear where the record(s) originate, as no reference is given and no record could be located. No records are listed for Kalimantan by Mann (2008), suggesting our record may be the first. In Sabah, Sarawak and Brunei White-throated Needletail is considered an uncommon passage migrant, with numerous records (Mann 2008), so its occurrence in Kalimantan is not unexpected.

GOLDEN-NAPED BARBET *Megalaima pulcherrima*

Bornean endemic. Commonly encountered above 1,100 m. This represents a notable southerly range extension for this species in Kalimantan, with the only previous records being to the north from the Kayan Mentarang ranges (van Balen 1997, Sebastian 2007).

BORNEAN BARBET *Megalaima eximia*

Bornean endemic. Commonly seen and heard at 1,100–1,600 m. Known in Kalimantan from previous records at only four locations, including Kayan Mentarang (Holmes 1997, Sebastian 2007), Barito Ulu (Wilkinson *et al.*

1991a), Liang Kubung (Büttikofer 1899) and Mt Nyiut in the far west (Priemé & Heegaard 1988).

GIANT PITTA *Pitta caerulea*

A bird heard calling within the Nakarta Rimba logging concession at around 150 m. Only three previous records from Kalimantan: near to Menyapa at the upper Mahakam river (reported in Büttikofer 1899), Mt Lumut, also in east Kalimantan (Wielstra & Pieterse 2010) and Gunung Palung National Park in the far south (Laman *et al.* 1991, Holmes 1997).

RED-RUMPED/STRIATED SWALLOW

Cecropis daurica/striolata

Two hirundines seen flying at around 1,600 m could not be conclusively identified to either species. Records of Red-rumped Swallow are very sparse in Borneo, and there is no confirmed record for Kalimantan, but they may be overlooked or inconclusively identified (Mann 2008). Striated Swallow appears more widespread, but again identification is not always conclusive (Mann 2008). Close attention should be paid to 'red-rumped' swallows seen anywhere in Borneo.

ASIAN HOUSE MARTIN *Delichon dasypus*

Three birds seen at around 1,600 m. This appears to be only the second record from Kalimantan, after the type specimen was collected near Pontianak in West Kalimantan by Diard in 1826 (reported in Smythies 1999). Several records exist from Sabah, Sarawak and Brunei, where this is presumed to be an accidental visitor (Mann 2008).

OLIVE-BACKED PIPIT *Anthus hodgsoni*

A single bird observed foraging along the forest-lined access track at around 650 m. This appears to be the first record of Olive-backed Pipit for Indonesia (Andrew 1992, Sukmantoro *et al.* 2007). The bird was a typical *Anthus* in shape, walking slowly through the grassy margins of the track. The upperparts were olive-green with a white supercilium behind the eye, buff in front, black spot at the rear of the ear-coverts, obvious black moustachial stripe and thick breast streaking. When the bird flushed at 10 m range it flew into the forest, giving a typical sharp *tzeet* call. Several previous records of Olive-backed Pipit exist from Sarawak, Sabah and Brunei, where it is considered a rare winter visitor (Mann 2008), making our record, while very notable, perhaps not entirely unexpected.

SUNDA CUCKOOSHRIKE *Coracina larvata*

Regularly encountered in singles and pairs above 1,100 m. Considered a montane resident in Borneo, but while there are numerous records from mountains in Sabah and Sarawak (Mann 2008) there appear to be only two previous records from Kalimantan, from Kayan Mentarang (Sebastian 2007) and Barito Ulu (Wilkinson *et al.* 1991a), suggesting a widespread but patchy distribution.

GREY-CHINNED MINIVET *Pericrocotus solaris*

Regular encounters with small flocks at 1,100–1,600 m. This represents a notable southerly range extension for this species in Kalimantan, with the only previous records being to the north from the Kayan Mentarang region

(Robson 1993, van Balen 1997, Sebastian 2007). Also known from Mt Dulit and Mt Mulu in Sarawak, Gunung Pagon in Brunei, and north to Mt Kinabalu in Sabah (Mann 2008).

STRAW-HEADED BULBUL *Pycnonotus zeylanicus*

Vulnerable. This species was present on the river adjacent to the start of the Menyapa Mountain track, at around 280 m. Three chicks were also being kept in a cage at the base camp station. This species is still an uncommon resident throughout Kalimantan, in contrast to Sumatra where it has become extremely scarce due to poaching pressure.

BLACK-AND-WHITE BULBUL *Pycnonotus melanoleucos*

Near-threatened. This species was commonly encountered in the Menyapa Mountains between 300 and 700 m. Elsewhere on Borneo it is an uncommon lowland to hill forest resident, with few records from montane areas.

*BORNEAN BULBUL *Pycnonotus montis*

Bornean endemic. Frequently seen at 1,100–1,600 m. We here follow Fishpool & Tobias's (2005) treatment of Bornean birds (taxon *montis*) as specifically distinct from mainland taxa of the Black-crested Bulbul *P. melanicterus*. An uncommon resident of north-central mountains of Borneo (Mann 2008).

*PALE-FACED BULBUL *Pycnonotus leucops*

Bornean endemic. Common above 1,200 m. A close relative of the widespread Flavescent Bulbul *P. flavesceus* from mainland South-east Asia, with which it is widely considered conspecific. Fishpool & Tobias (2005) and Myers (2009) pointed to considerable morphological and vocal differences and indicated that species status for this montane Bornean endemic may be warranted. In view of our own unpublished preliminary data on this form we here treat it as a separate species. Our records represent a notable southerly range extension in Kalimantan, with the only previous sightings being to the north from Kayan Mentarang (van Balen 1997).

*BORNEAN LEAFBIRD *Chloropsis kinabaluensis*

Bornean endemic. The montane form of Blue-winged Leafbird *C. cochinchinensis* on Borneo is treated as a separate species, *C. kinabaluensis*, by several authors (Wells *et al.* 2003, Mann 2008, Myers 2009, Phillipps & Phillipps 2009). We recorded it commonly above 1,100 m in the Menyapa Mountains, apparently replacing *C. viridimucha* at higher altitudes without any morphological intergradation (see below). This apparent local parapatry in the Menyapa Mountains supports the separation of *C. kinabaluensis* as a species. The distribution of *C. kinabaluensis* is believed to be limited to Borneo's northern mountain ranges only, as far south as Mt Dulit and the Usun Apau Plateau. Previous surveys in montane habitat in Kayan Mentarang have recorded '*C. (cochinchinensis) flavocincta*' (*sic*) (van Balen 1997) which is considered to refer to the form *C. kinabaluensis*, while Büttikofer (1899) recorded '*C. viridimucha*' (*sic*) from Mt Kenapai and Liang Kubung, as did Wilkinson *et al.* (1991b) from Barito Ulu in central Kalimantan. Our sightings from Menyapa therefore appear to represent a notable southerly range extension in the species's distribution.

BLUE-WINGED LEAFBIRD

Chloropsis cochinchinensis viridinucha

A pair seen at around 300 m. See taxonomic and distributional notes above.

*BORNEAN WHISTLING THRUSH *Myophonus borneensis*

Bornean endemic. Seen once at around 1,600 m. We follow Collar (2004) in recognising *M. borneensis* as specifically distinct from *M. glaucinus* and *M. castaneus*. Previous records from Kalimantan were made by Büttikofer (1899) at Liang Kubung to the west of Menyapa, and by van Balen & Nurwatha (1999) in Kayan Mentarang. In Sabah and Sarawak this species is widely distributed north to south, including Mts Kinabalu, Dulit, Mulu, Penrissen, Pueh Tegora and Bau (Everett 1890, Smythies 1957, Mann 2008), suggesting a wide distribution throughout the central ranges.

WHITE-BROWED SHORTWING *Brachypteryx montana*

Recorded above 1,600 m. Only the second confirmed site for this species in Kalimantan, being previously known from the Kayan Mentarang region to the north (van Balen 1997) and adjacent ranges in Sarawak and Sabah (Mann 2008).

BORNEAN STUBTAIL *Urosphena whiteheadi*

Bornean endemic. Recorded twice at around 1,600 m. This species has previously been recorded in Kayan Mentarang to the north by van Balen (1997) and to the south-west at Mt Kenepai (Büttikofer 1899), Barito Ulu (Wilkinson *et al.* 1991b) and Gn Liang Kubung (Smythies 1957).

MOUNTAIN TAILORBIRD *Orthotomus cuculatus*

Commonly heard and seen occasionally above 1,100 m. In Kalimantan previously only known from three widely separated sites: Kayan Mentarang in the north (Holmes 1997, Sebastian 2007), Mt Muratus in the far south (Davison 1997), and Mt Nyiut in the far west (Priemé & Heegaard 1988).

MOUNTAIN LEAF WARBLER *Phylloscopus trivirgatus*

Common above 1,500 m; sound recordings made. Previously recorded at only three locations in Kalimantan: Kayan Mentarang in the north (Sebastian 2007), Mt Muratus in the far south (Davison 1997), and Mt Nyiut in the far west (Priemé & Heegaard 1988). This species is commonly recorded on mountains in Sabah and Sarawak (Mann 2008), and the lack of records from Kalimantan is surprising, given how widely separated the known sites are.

YELLOW-BREASTED WARBLER *Seicercus montis*

Commonly encountered in mixed feeding flocks at higher altitudes (from around 1,000 m). Only two previous Kalimantan records are apparent: from the far south in the Muratus Mountains (Davison 1997) and from the far west, at Mt Nyiut (Priemé & Heegaard 1988). The species is more commonly recorded in mountains of both Sabah and Sarawak, including Trus Madi, Mt Kinabalu, Crocker Range, Mt Pueh and the Apad Runan range, adjacent to the East Kalimantan border (Mann 2008). Our record fills a gap in the species's distribution in east-central Kalimantan, but the lack of further records from Kalimantan remains hard to explain, and suggests a very patchy distribution.

SUNDA BUSH WARBLER *Cettia vulcania*

Seen and heard twice at 1,650 m. Apparently only the second record for Kalimantan, having previously been recorded from Kayan Mentarang (van Balen 1997). The species is also found from Mt Kinabalu in Sabah in the north, to Mt Murud in Sawarak to the south (Mann 2008).

EYEBROWED JUNGLE FLYCATCHER *Rhinomyias gularis*

Bornean endemic. Recorded once at around 1,600 m. This species has previously been recorded in Kayan Mentarang, to the north, by van Balen (1997) and to the far south of Kalimantan in the isolated Muratus Mountains (Davison 1997).

GREY-STREAKED FLYCATCHER *Muscicapa griseisticta*

Seen twice, at 350 m and 1,300 m. Apparently only the fourth record for Kalimantan of this rare non-breeding season migrant, previous sightings being from Kayan Mentarang and near Pontianak (van Balen & Aspinall 1996) and the Sangkulirang Peninsula (Eames 2005). Only a further 5–6 records exist from the whole of Borneo (Mann 2008).

FERRUGINOUS FLYCATCHER *Muscicapa ferruginea*

Seen once at 650 m. Appears to be only the second published record for Kalimantan of this rare non-breeding season migrant, having previously been collected nearby at 'Punt 1', 1,172 m, above Long Petah, Telen River, East Kalimantan by Siebers in 1925 (reported in Kloss 1930).

INDIGO FLYCATCHER *Eumyias indigo*

Several recorded above 1,500 m. Previous Kalimantan records have all been from Kayan Mentarang (van Balen 1997, Sebastian 2007), so this represents a notable, if not unexpected, range extension southwards.

SNOWY-BROWED FLYCATCHER *Ficedula hyperythra*

Heard and seen occasionally above around 1,000 m. This species has only been recorded from two sites in Kalimantan: the Kayan Mentarang ranges to the north of Menyapa (Sebastian 2007) and in the far west at Mt Nyiut (Priemé & Heegaard 1988). Our record therefore represents a notable south-easterly range extension within Kalimantan. There are also relatively few records of Snowy-browed Flycatcher from Sabah and Sarawak, including from Mt Pueh, Mt Tamo Abo, Mt Mulu and Mt Kinabalu (Mann 2008).

BLUE-AND-WHITE FLYCATCHER *Cyanoptila cyanomelana*

An adult male seen at 650 m. There are more records of this winter visitor in Sabah, Sarawak and Brunei, than Kalimantan, where it is only known from four previous records, including Mt Kenepai (Büttikofer 1899), Bukit Baka (Rice 1989), Mt Lumut (Wielstra & Pieterse 2010) and Tanjung Selor (Holmes 1997).

BORNEAN WHISTLER *Pachycephala hypoxantha*

Bornean endemic. Seen commonly at around 1,600 m. This species has previously been recorded for Kalimantan from Kayan Mentarang (van Balen & Nurwatha 1997, Sebastian 2007), Barito Ulu (Wilkinson *et al.* 1991a) and Mt Nyiut far to the west (Priemé & Heegaard 1988), but interestingly was not recorded nearer to the west by Büttikofer (1899) at Mt Kenepai or Liang Kubung. Bornean Whistler has also been recorded from Mt

Kinabalu in Sabah, south to the Pueh Range in Sarawak (Mann 2008), suggesting something of a patchy and broken distribution among the mountains of north-central Borneo, and making our records an apparent range extension to the south-east.

SUNDA LAUGHINGTHRUSH *Garrulax palliatus*

Commonly encountered above 1,100 m. Previously only recorded in Kalimantan from Kayan Mentarang (van Balen & Nurwatha 1997, Sebastian 2007) and the far south of Kalimantan at Gunung Palung National Park (Laman *et al.* 1991). Interestingly this species was not recorded by Büttikofer (1899) at Mt Kenepai or Liang Kubung, which lie between these other records. In Malaysia this species is found from Mt Kinabalu in the north to Mt Dulit in the south (Mann 2008), suggesting a limited and patchy distribution in Borneo and making our records a notable range extension within the central ranges.

*CHESTNUT-HOODED LAUGHINGTHRUSH

Rhinocichla treacheri

Commonly encountered above 1,100 m. Bornean populations were recently split off from Sumatran and mainland Asian birds (now Spectacled Laughingthrush *R. mitrata*) on morphological grounds (Collar 2006). Previously recorded in Kalimantan from Kayan Mentarang (Finsch 1906, van Balen & Nurwatha 1997, Sebastian 2007), Bukit Baka in northern Central Kalimantan (Rice 1989), the Schwaner and Müller ranges (reported in Mann 2008) and in the far south-east in the isolated Muratus Mountains (Davison 1997). The species was not, however, recorded to the west by Büttikofer (1899) at Mt Kenepai or Liang Kubung. The distribution of this species in Kalimantan therefore appears patchy, but widespread.

*BLYTH'S SHRIKE BABBLER *Pteruthins aeralatus*

Commonly heard, seen twice, from above 1,100 m. This species is widely known as White-browed Shrike Babbler, but we here follow Rheindt & Eaton (2009) in including Bornean populations in the newly delimited South-East Asian 'Blyth's Shrike Babbler' *P. aeralatus*, distinct from Javan birds and two other forms from mainland Asia. In Kalimantan the species is previously only known from three widely separated sites: Kayan Mentarang in the north (Holmes 1997, Sebastian 2007), Mt Muratus in the far south (Davison 1997), and Mt Nyiut in the far west (Priemé & Heegaard 1988). Our record therefore fills a gap in the distribution by lying in the centre of these previous records.

*STREAKY-BREASTED SPIDERHUNTER

Arachnothera affinis everetti

Very common between 1,100 and 1,600 m. Previously recorded by Büttikofer (1899) to the west at Mt Kenepai and Liang Kubung, close to Menyapa in the upper tributaries of the Mahakam (Stresemann 1938), and in Kayan Mentarang (van Balen & Nurwatha 1997). At Menyapa this species appeared to be replaced by Grey-breasted Spiderhunter *Arachnothera modesta*, at lower elevations (the latter commoner up to 300–400 m).

YELLOW-RUMPED FLOWERPECKER

Prionochilus xanthopygius

Several seen at around 300–500 m including several males. Records of this species are relatively sparse from

Kalimantan, including by Büttikofer (1899) at Mt Kenepai, Liang Kubung and the upper Mahakam river, by Wilkinson *et al.* (1991a) at Barito Ulu and by van Balen & Nurwatha (1997) at Kayan-Mentarang. Yellow-rumped Flowerpecker is more widely distributed to the north and west in Sabah, Brunei and Sarawak (Mann 2008).

BLACK-SIDED FLOWERPECKER *Dicaeum monticulum*

Commonly seen above around 1,000 m. Surprisingly few records exist from Kalimantan of this species, including from Kayan Mentarang (Holmes 1997, Sebastian 2007), from the Muratus Mountains (Davison 1997) and Gunung Liang Kubang (Büttikofer 1899). More commonly recorded in mountains of Sabah and Sarawak (Mann 2008).

BLACK-CAPPED WHITE-EYE *Zosterops atricapillus*

Several flocks encountered at around 1,400 m. This species has previously been recorded in Kayan Mentarang to the north (van Balen 1997) and to the far south-east of Kalimantan in the Muratus Mountains (Davison 1997), so our record fills a gap in the north–south distribution.

PYGMY IBON *Ocnocincta squamifrons*

Bornean endemic. Seen frequently at around 300 m. This species has a patchy distribution across the north-central ranges of Borneo, typically being recorded as mid-altitudinal. Previous records from Kalimantan were made by Büttikofer (1899) at Mt Kenepai and Liang Kubung, from Kayan Mentarang (Pfeffer 1960–1961, but not by subsequent observers in the region), and from Barito Ulu (Wilkinson *et al.* 1991a).

BLACK-AND-CRIMSON ORIOLE *Oriolus cruentus*

Regularly heard and seen above 1,000 m. Only the second confirmed site record for Kalimantan, having previously been recorded in the Kayan Mentarang region (Smythies 1957, Robson 1993, van Balen 1997, Sebastian 2007, Pfeffer 1960–1961). Our record therefore represents a notable southerly range expansion. In Malaysia this species is known as far north as Mt Kinabalu in Sabah, and as far south as Mt Mulu in Sarawak (Mann 2008).

HAIR-CRESTED DRONGO *Dicrurus hottentottus*

Occasionally seen and heard at all altitudes. This species is a widespread but local resident in lowland and submontane forest in Sabah, Sarawak and Brunei (Mann 2008) but surprisingly only three previous records exist from Kalimantan localities: Kutai National Park in the lowlands of east Kalimantan (Duckworth & Kelsh 1988); Barito Ulu, in central Kalimantan (Wilkinson *et al.* 1991a); and Matasirih Island off the coast in south Kalimantan (Oberholser 1917). The lack of records is surprising, and suggests a very patchy distribution.

SHORT-TAILED MAGPIE *Cissa thalassina*

Seen once at around 1,600 m. This constitutes the first record for Kalimantan (Andrew 1992, Sukmantoro *et al.* 2007), being known previously only from Sabah and Sarawak, from Kinabalu in the north to Mt Dulit in the south (Mann 2008).

BORNEAN TREEPIE *Dendrocitta cinerascens*

Bornean endemic. Common above 1,000 m. Only the

fourth confirmed site for Kalimantan, filling a gap in the north–south distribution. Previous Kalimantan records are from the Kayan Mentarang ranges (van Balen 1997), Müller ranges (Reid 1997) and Mahakam drainage (Smythies 1999).

Notable species not recorded

COLLARED OWLET *Glaucidium brodiei*

Recorded in Kalimantan only at Mt Kenepai (Büttikofer 1899), in Kayan-Mentarang (van Balen & Nurwatha 1997) and at Sungai Wain Protection Forest near Balikpapan (Slik & van Balen 2006). In Sabah and northern Sarawak it is a relatively widespread but rare resident from 500 to 2,000 m (Mann 2008). Given the wide distribution, this species might also be expected in the Menyapa Mountains.

DULIT FROGMOUTH *Batrachostomus harterti*

Known from only a handful of records in Borneo, including Mt Dulit, the Usun-Apau Plateau, and the Kelabit Highlands in Sarawak, Poring in Sabah, and Gunung Liang Kubang in Kalimantan (Sharpe 1892, Hose 1893, Büttikofer 1899, Smythies 1957, Babbington 1992). These records suggest a rare bird with a relatively large distribution. It might well be found in the Menyapa Mountains with more intensive searches.

WHITEHEAD'S TROGON *Harpactes whiteheadi*

Previously only recorded in Kalimantan from the Kayan Mentarang ranges to the north (van Balen 1997). This species appears to have a very restricted northerly range within Borneo. It was the only species of trogon not recorded by Büttikofer (1899).

WHITEHEAD'S BROADBILL *Calyptomena whiteheadi*

Previously recorded in Kalimantan from the Kayan Mentarang ranges to the north (van Balen 1997, Sebastian 2007), from Gunung Duk Nan (Pfeffer 1960–1961), Mau on Sungai Bengalun (Smythies 1999), Gunung Batu Timbang and Madang (Smythies 1957). This species appears to have a restricted northerly range within Borneo. It was not recorded by Büttikofer (1899).

HOSE'S BROADBILL *Calyptomena hosii*

Widely distributed in the northern half of Borneo, but more typically at altitudes lower than we focused on. It may well be present in lower parts of the Menyapa Mountains.

FRUITHUNTER *Chlamydochaera jefferyi*

Only two records exist from Kalimantan: from Mt Nyiut in the far west (Priemé & Heegaard 1988) and Bukit Baka on the border of West and Central Kalimantan (Rice 1989). This species appears restricted to the western ranges in Kalimantan, so its occurrence in Menyapa may be unlikely.

MOUNTAIN WREN BABBLER *Napothera crassa*

Known from Kalimantan from the Kayan Mentarang ranges (van Balen & Nurwatha 1997, Sebastian 2007) and Mt Nyiut in the far west (Priemé & Heegaard 1988). Considered to have a fairly wide distribution across northern Kalimantan, but not recorded in Menyapa during our survey, nor by Büttikofer (1899) at Mt Kenepai

or Liang Kubung, suggesting a more restricted distribution.

EYEBROWED WREN BABBLER *Napothera epilepidota*

Apparently widely distributed across the mountains of the northern half of Borneo (Mann 2008), and previously recorded in Kalimantan from Kayan-Mentarang (van Balen & Nurwatha 1997), upper Telen River (Smythies 1957), Barito Ulu (Wilkinson *et al.* 1991b), Mt Liang Kubung (Büttikofer 1899), Kapuas drainage (Smythies 1957) and Mt Nyiut (Priemé & Heegaard 1988). Our lack of records possibly suggests a patchy occurrence across this range.

WHITEHEAD'S SPIDERHUNTER *Arachnothera juliae*

Previously recorded in Kalimantan only from the Kayan Mentarang ranges to the north (Robson 1993, van Balen 1997, Sebastian 2007). More commonly recorded in the mountains of Sabah and northern Sarawak (Mann 2008), suggesting a limited northerly distribution within Borneo.

MOUNTAIN BLACK-EYE *Chlorocharis emiliae*

Limited to mountains in the north-central ranges at 1,500–2,600 m. Records exist from Mt Kinabalu in Sabah in the north to the Pueh Ranges in Sarawak to the south, and in Kalimantan from Kayan Mentarang (Sebastian 2007) and Mt Nyiut (Priemé & Heegaard 1988). Given this, the species might well be expected within the Menyapa Mountains, perhaps at higher elevations than those we surveyed.

DISCUSSION

Biological importance

Our records from the Menyapa Mountains show a high proportion of the distinct montane Bornean avifauna to be present, extending the known range of many species southwards, and filling a gap in the north–south distribution of other species. Notably we recorded one species previously unknown from Kalimantan, Short-tailed Magpie, one species new for Indonesia, Olive-backed Pipit, and a number of other species only recorded very rarely. Several Bornean montane species were not recorded during our survey, which may indicate more restricted northerly or westerly ranges, but this is hard to conclude based on such a short visit. Further survey work in the Menyapa Mountains would undoubtedly yield more interesting information.

Conservation status

Conservation of the Menyapa Mountains remains a priority as they represent one of the largest remaining blocks of undisturbed forest at middle to high altitudes in Kalimantan. Currently they are not under direct threat, as several logging concessions that exist within and around them are inactive, but conditions could change rapidly. If the road to PT Essam is re-opened fully, or the PT Muggitriman concession becomes active, the situation could deteriorate. Plans underway to convert the Muggitriman concession into restoration forest, freeing it from the risk of commercial logging, would be extremely welcome if successfully implemented. Efforts to minimise access to the current PT Essam road, or to reduce gaharu

collecting generally, could also reduce disturbance to the forest interior.

ACKNOWLEDGEMENTS

We wish to thank The Nature Conservancy (TNC) Indonesia Program for initiating and facilitating this survey and for providing all logistic support. In particular we would like to thank Erik Meijaard and the TNC field team of Syahroni, Joko Susatmoko and Lenny Christy. We also thank Bonie Dewantara of WCS Indonesia for creating the map, Bas van Balen and Clive Mann for comments on earlier drafts of this manuscript, and Colin Poole for assistance in locating some of the references.

REFERENCES

- Andrew, P. (1992) *The birds of Indonesia: a checklist (Peters' sequence)*. Jakarta: Indonesian Ornithological Society.
- Babbington, J. (1992) A report on the birds of Sabah. A visit between March 8th and March 23rd 1992. Unpublished trip report.
- Banks, E. (1937) The distribution of Bornean birds. *Sarawak Mus. J.* 4: 453–496.
- Bohap, J. & Galdikas, B. M. F. (1987) Birds of Tanjung Puting National Park, Kalimantan Tengah – a preliminary list. *Kukila* 3: 138–140.
- van Balen, S. (1997) Faunistic notes from Kayan Mentarang, with new records for Kalimantan. *Kukila* 9: 108–113.
- van Balen, S. (1999) Note on the distribution of the Kinabalu Serpent-eagle with a first record for Kalimantan. *Kukila* 10: 154–156.
- van Balen, S. & Aspinall, S. (1996) First record of Grey-streaked Flycatcher in Kalimantan. *Kukila* 8: 142–144.
- van Balen, S. & Nurwatha, P. F. (1997) The birds of the Kayan Mentarang National Park, East Kalimantan, Indonesia. Report to WWF Indonesia Program.
- Büttikofer, J. (1899) Zoological results of the Dutch Scientific Expedition to Central Borneo. *Notes Leyden Museum* 21: 145–276.
- Collar, N. J. (2004) Species limits in some Indonesian thrushes. *Forktail* 20: 71–87.
- Collar, N. J. (2006) A partial revision of the Asian babblers (Timaliidae). *Forktail* 22: 85–112.
- Davison, G. W. H. (1997) Bird observations in the Muratus Mountains, Kalimantan Selatan. *Kukila* 9: 114–121.
- Duckworth, J. W. & Kelsh, R. (1988) *A bird inventory of Similajau National Park*. Cambridge, UK: ICBP Study Report No. 31.
- Eames, J. C. (2005) A preliminary ornithological assessment and conservation evaluation of the PT Daisy logging concession, Berau district, East Kalimantan, Indonesia. *Forktail* 21: 51–60.
- Everett, A. H. (1890) Letters. *Ibis* 263: 465.
- Finsch, O. (1905) Dr A. W. Nieuwenhuis' Erforschungsreisen in Niederländisch Borneo. Ornithologische Ergebnisse. *Notes Leyden Mus.* 26: 1–154.
- Fishpool, L. D. C. & Tobias, J. A. (2005) Family Pycnonotidae (bulbuls). Pp.124–251 in J. del Hoyo, A. D. Elliott & J. Sargatal, eds. *Handbook of birds of the world*, 10. Barcelona: Lynx Edicions.
- Holmes, D. A. (1997) Kalimantan Bird Report–2. *Kukila*. 9: 141–169.
- Hose, C. (1893) On the avifauna of Mt Dulit and the Baram district in the territory of Sarawak. *Ibis* 14: 381–424.
- Inskipp, T., Lindsey, N. & Duckworth, W. (1996) *An annotated checklist of the birds of the Oriental Region*. Sandy, U.K.: Oriental Bird Club.
- IUCN (2010) *IUCN Red List of threatened species*. Version 2010.1. www.iucnredlist.org. Downloaded April 2010.
- Kloss, C. B. (1930) An account of the Bornean birds in the Zoological Museum, Buitenzorg, with the description of new race. *Treubia* 12: 395–430.
- Laman, T. G., Lukas, D. E., Gaither, J. C. & Bowen, R. (1991) Preliminary list of the birds of Gunung Palung National Park, West Kalimantan, Indonesia. Unpublished.
- Mann, C. F. (2008) *The birds of Borneo, an annotated checklist*. Peterborough: British Ornithologists' Union Checklist 23.
- McGowan, P. J. K. (1994) Family Phasianidae (pheasants and partridges). Pp.434–552 in J. del Hoyo, A. Elliott & J. Sargatal, eds. *Handbook of the birds of the world*, 2. Barcelona: Lynx Edicions.
- Moyle, R. G., Hosner, P. A., Nais, J., Maklarin, L. & Sheldon, F. H. (2008) Taxonomic status of the Kinabalu 'linchi' swiftlet. *Bull. Brit. Orn. Club* 128: 94–100.
- Myers, S. (2009) *Birds of Borneo*. Princeton: Princeton University Press.
- Nash, S. V. & Nash, A. D. (1988) An annotated checklist of the bird of Tanjung Puting National Park, Central Kalimantan. *Kukila* 3: 93–116.
- Oberholser, H. C. (1917) Birds collected by Dr. W. L. Abbott on various islands in the Java Sea. *Proc. U.S. Natn. Mus.* 54: 177–200.
- Pfeffer, P. L. (1960–1961) Étude d'une collection d'oiseaux de Borneo. *Oiseau et R.F.O.* 30: 154–168, 31: 1–29.
- Phillipps, Q. & Phillipps, K. (2009) *Phillipps' field guide to the birds of Borneo: Sabah, Sarawak, Brunei and Kalimantan*. Oxford: John Beaufoy Books.
- Priemé, A. & Heegaard, M. (1988) A visit to Gunung Nyiut in West Kalimantan. *Kukila* 3: 138–141.
- Reid, C. (1997) A record of Bornean Treepie from Kalimantan Barat. *Kukila* 9: 179–180.
- Rheindt, F. E. & Eaton, J. A. (2009) Species limits in *Pteruthius* (Aves: Corvida) shrike-babblers: a comparison between the Biological and Phylogenetic Species Concepts. *Zootaxa* 2301: 29–54.
- Rice, C. G. (1989) A further range extension of the Black-breasted Thrush *Chlamydochaera jefferyi* in Kalimantan. *Kukila* 4: 47–48.
- Robson, C. (1993) From the field. *Oriental Bird Club Bull.* 18: 67–70.
- Sebastian, A. (2007) A preliminary investigation of the mammal and bird fauna of Gunung Arun, North Krayan, East Kalimantan, Republic of Indonesia. Report to WWF Indonesia Program.
- Sharpe, R. B. (1892a) Descriptions of new species of birds discovered by Mr. C. Hose on Mount Dulit in N.W. Borneo. *Ibis* (6)4: 322–324.
- Sheldon, F. H., Moyle, R.G. & Kennard, J. (2001) Ornithology of Sabah: history, gazetteer, annotated checklist, and bibliography. *Ornithological Monographs* 52.
- Slik, J. W. F. & van Balen, S. (2006) Bird community changes in response to single and repeated fires in a lowland tropical rainforest of eastern Borneo. *Biodiversity & Conservation* 15: 4425–4451.
- Smythies, B. E. (1957) An annotated checklist of the birds of Borneo. *Sarawak Mus. J.* 7: 523–818.
- Smythies, B. E. (1999) *The birds of Borneo*. Fourth Edition. Kota Kinabalu: Natural History Publications.
- Stresemann, E. (1937) Kritische Studien über die Gattung *Batrachostomus*. *Mitt. Zool. Mus. Berlin* 22: 304–329.
- Stresemann, E. (1938) Vögel von Fluss Kajan (Nordost Borneo) gesammelt von Baron Victor von Plessen. *Temminckia* 3: 109–136.
- Sukmantoro, W., Irham, M., Novarino, W., Hasudungan, F., Kemp, N. & Muchtar, M. (2007) *Daftar Burung Indonesia no. 2*. Bogor: Indonesian Ornithologists' Union.
- Voous, K. H. (1961) Birds collected by Carl Lumholtz in eastern and central Borneo. *Nytt Mag. Zool.* 10: 127–180.
- Wells, D. R., Dickinson, E. C. & Dekker, R. W. R. J. (2003) Systematic notes on Asian birds. 37. A preliminary review of the Chloropseidae and Irenidae. *Zool. Verhand. Leiden* 344: 25–42.
- Wielstra, B. & Pieterse, S. (2010) Gunung Lumut Protection Forest (East Kalimantan) first survey results and recommendation as an Important Bird Area. *Kukila* 14: 1–15.
- Wilkinson, R., Dutson, G., Sheldon, B., Darjono & Noor, Y. R. (1991a) The avifauna of the Barito Ulu region, Central Kalimantan. *Kukila* 5: 99–116.

Wilkinson, R., Dutson, G., & Sheldon, B. (1991b) *The avifauna of Barito Ulu, Central Borneo*. Cambridge, UK: ICBP Study Report No. 48.

Wulffraat, S. & Samsu (2000) An overview of the biodiversity of Kayan Mentarang National Park. WWF-Indonesia Kayan Mentarang Project, Samarinda.

Nick W. Brickle, Wildlife Conservation Society – Indonesia Program. Jl. Burangrang No. 18, Bogor, 16151, Indonesia. Email: nick@brickle.com

James A. Eaton, Birdtour Asia Ltd, 17 Keats Avenue, Littleover, Derby, DE23 4EE U.K. Email: jameseaton@birdtourasia.com

Frank E. Rheindt, Harvard University, Department of Organismic and Evolutionary Biology, MCZ, 5th Floor, 26 Oxford St., Cambridge, MA 02138, U.S.A. Email: frankrheindt@yahoo.com.au

APPENDIX

Bird records for the Menyapa Mountains and foothills, 21–27 November 2007

Taxonomy of species marked * deviates from Inskipp *et al.* (1996).

Common name / Scientific name	Common name / Scientific name
ORIENTAL DARTER <i>Anhinga melanogaster</i>	GLOSSY SWIFTLET <i>Collocalia esculenta</i>
LESSER FISH EAGLE <i>Ichthyophaga humilis</i>	*BORNEAN SWIFTLET <i>Collocalia dodgei</i>
MOUNTAIN SERPENT EAGLE <i>Spilornis kinabaluensis</i>	BLACK-/MOSSY-NEST SWIFTLET <i>Aerodramus maximus/salangana</i>
CRESTED SERPENT EAGLE <i>Spilornis cheela</i>	EDIBLE-NEST SWIFTLET <i>Aerodramus fuciphagus</i>
CRESTED GOSHAWK <i>Accipiter trivirgatus</i>	SILVER-RUMPED NEEDLETAIL <i>Rhaphidura leucopygialis</i>
BLACK EAGLE <i>Ictinaetus malayensis</i>	WHITE-THROATED NEEDLETAIL <i>Hirundapus caudacutus</i>
RUFIOUS-BELLIED EAGLE <i>Aquila kienerii</i>	BROWN-BACKED NEEDLETAIL <i>Hirundapus giganteus</i>
BLYTH'S HAWK EAGLE <i>Nisaetus alboniger</i>	PACIFIC SWIFT <i>Apus pacificus</i>
WALLACE'S HAWK EAGLE <i>Nisaetus namus</i>	GREY-RUMPED TREESWIFT <i>Hemiprocne longipennis</i>
BLACK-THIGHED FALCONET <i>Microhierax fringillarius</i>	WHISKERED TREESWIFT <i>Hemiprocne comata</i>
RED-BREASTED PARTRIDGE <i>Arborophila hyperythra</i>	BLUE-EARED KINGFISHER <i>Alcedo meninting</i>
CRIMSON-HEADED PARTRIDGE <i>Haematoryx sanguiniceps</i>	BLUE-BANDED KINGFISHER <i>Alcedo euryzona</i>
FERRUGINOUS PARTRIDGE <i>Caloperdix oculea</i>	*RUFIOUS-BACKED KINGFISHER <i>Ceyx rufidorsa</i>
CRESTED FIREBACK <i>Lophura ignita</i>	RUFIOUS-COLLARED KINGFISHER <i>Actenoides concretus</i>
BULWER'S PHEASANT <i>Lophura bulweri</i>	ORIENTAL PIED HORNBILL <i>Anthracoceros albirostris</i>
GREAT ARGUS <i>Argusianus argus</i>	BLACK HORNBILL <i>Anthracoceros malayanus</i>
RUDY CUCKOO DOVE <i>Macropygia emiliana</i>	RHINOCEROS HORNBILL <i>Buceros rhinoceros</i>
LITTLE CUCKOO DOVE <i>Macropygia ruficeps</i>	HELMETED HORNBILL <i>Buceros vigil</i>
EMERALD DOVE <i>Chalcophaps indica</i>	BUSHY-CRESTED HORNBILL <i>Anorrhinus galeritus</i>
JAMBU FRUIT DOVE <i>Ptilinopus jambu</i>	WRINKLED HORNBILL <i>Aceros corrugatus</i>
BLUE-CROWNED HANGING PARROT <i>Loriculus galgulus</i>	WREATHED HORNBILL <i>Aceros undulatus</i>
*DARK HAWK CUCKOO <i>Cuculus bocki</i>	GOLD-WHISKERED BARBET <i>Megalaima chrysopogon</i>
MOUSTACHED HAWK CUCKOO <i>Cuculus vagans</i>	RED-THROATED BARBET <i>Megalaima mystacophanos</i>
*SUNDA LESSER CUCKOO <i>Cuculus lepidus</i>	MOUNTAIN BARBET <i>Megalaima monticola</i>
BANDED BAY CUCKOO <i>Cacomantis sonneratii</i>	YELLOW-CROWNED BARBET <i>Megalaima henricii</i>
*RUSTY-BREASTED CUCKOO <i>Cacomantis variolosus</i>	GOLDEN-NAPED BARBET <i>Megalaima pulcherrima</i>
VIOLET CUCKOO <i>Chrysococcyx xanthorhynchus</i>	BLUE-EARED BARBET <i>Megalaima australis</i>
DRONGO CUCKOO <i>Surniculus lugubris</i>	BORNEAN BARBET <i>Megalaima eximia</i>
RAFFLES'S MALKOHA <i>Phaenicophaeus chlorophaeus</i>	BROWN BARBET <i>Calorhamphus fuliginosus</i>
GREATER COUCAL <i>Centropus sinensis</i>	CRIMSON-WINGED WOODPECKER <i>Picus puniceus</i>
MOUNTAIN SCOPS OWL <i>Otus spilocephalus</i>	OLIVE-BACKED WOODPECKER <i>Dinopium rafflesii</i>
BORNEAN FROGMOUTH <i>Batrachostomus mixtus</i>	MAROON WOODPECKER <i>Blythipicus rubiginosus</i>
BARRED EAGLE-OWL <i>Bubo sumatranus</i>	BUFF-RUMPED WOODPECKER <i>Meiglyptes tristis</i>
*GREY NIGHTJAR <i>Caprimulgus jotaka</i>	BUFF-NECKED WOODPECKER <i>Meiglyptes tukki</i>

Common name / Scientific name	Common name / Scientific name
BLACK-AND-RED BROADBILL <i>Cymbirhynchus macrorhynchos</i>	ASHY TAILORBIRD <i>Orthotomus ruficeps</i>
BANDED BROADBILL <i>Eurylaimus javanicus</i>	ARCTIC WARBLER <i>Phylloscopus borealis</i>
BLACK-AND-YELLOW BROADBILL <i>Eurylaimus ochromalus</i>	MOUNTAIN LEAF WARBLER <i>Phylloscopus trivirgatus</i>
GREEN BROADBILL <i>Calyptomena viridis</i>	YELLOW-BREASTED WARBLER <i>Seicercus montis</i>
GIANT PITTA <i>Pitta caerulea</i>	EYEBROWED JUNGLE FLYCATCHER <i>Rhinomyias gularis</i>
GARNET PITTA <i>Pitta granatina</i>	GREY-STREAKED FLYCATCHER <i>Muscicapa griseisticta</i>
BARN SWALLOW <i>Hirundo rustica</i>	DARK-SIDED FLYCATCHER <i>Muscicapa sibirica</i>
PACIFIC SWALLOW <i>Hirundo tahitica</i>	ASIAN BROWN FLYCATCHER <i>Muscicapa dauurica</i>
RED-RUMPED/STRIATED SWALLOW <i>Cecropis daurica/striolata</i>	FERRUGINOUS FLYCATCHER <i>Muscicapa ferruginea</i>
ASIAN HOUSE MARTIN <i>Delichon dasypus</i>	MUGIMAKI FLYCATCHER <i>Ficedula mugimaki</i>
GREY WAGTAIL <i>Motacilla cinerea</i>	SNOWY-BROWED FLYCATCHER <i>Ficedula hyperythra</i>
OLIVE-BACKED PIPIT <i>Anthus hodgsoni</i>	LITTLE PIED FLYCATCHER <i>Ficedula westermanni</i>
SUNDA CUCKOOSHRIKE <i>Coracina larvata</i>	BLUE-AND-WHITE FLYCATCHER <i>Cyanoptila cyanomelana</i>
FIERY MINIVET <i>Pericrocotus igneus</i>	VERDITER FLYCATCHER <i>Eumyias thalassina</i>
SCARLET MINIVET <i>Pericrocotus flammeus</i>	INDIGO FLYCATCHER <i>Eumyias indigo</i>
GREY-CHINNED MINIVET <i>Pericrocotus solaris</i>	MALAYSIAN BLUE FLYCATCHER <i>Cyornis turcosus</i>
BAR-WINGED FLYCATCHER-SHRIKE <i>Hemipus picatus</i>	BORNEAN BLUE FLYCATCHER <i>Cyornis superbus</i>
STRAW-HEADED BULBUL <i>Pycnonotus zeylanicus</i>	GREY-HEADED CANARY FLYCATCHER <i>Culicicapa ceylonensis</i>
BLACK-AND-WHITE BULBUL <i>Pycnonotus melanoleucus</i>	ORIENTAL MAGPIE ROBIN <i>Copsychus saularis</i>
BLACK-HEADED BULBUL <i>Pycnonotus atriceps</i>	WHITE-RUMPED SHAMA <i>Copsychus malabaricus</i>
*BORNEAN BULBUL <i>Pycnonotus montis</i>	WHITE-THROATED FANTAIL <i>Rhipidura albicollis</i>
GREY-BELLIED BULBUL <i>Pycnonotus cyaniventris</i>	PIED FANTAIL <i>Rhipidura javanica</i>
*PALE-FACED BULBUL <i>Pycnonotus leucops</i>	BLACK-NAPE MONARCH <i>Hypothymis azurea</i>
YELLOW-VENTED BULBUL <i>Pycnonotus goiavier</i>	ASIAN PARADISE-FLYCATCHER <i>Terpsiphone paradisi</i>
OLIVE-WINGED BULBUL <i>Pycnonotus plumosus</i>	BORNEAN WHISTLER <i>Pachycephala hypoxantha</i>
CREAM-VENTED BULBUL <i>Pycnonotus simplex</i>	SUNDA LAUGHINGTHRUSH <i>Garrulax palliatus</i>
RED-EYED BULBUL <i>Pycnonotus brunneus</i>	*CHESTNUT-HOODED LAUGHINGTHRUSH <i>Rhinocichla treacheri</i>
SPECTACLED BULBUL <i>Pycnonotus erythrophthalmos</i>	WHITE-CHESTED BABBLER <i>Trichastoma rostratum</i>
FINSCH'S BULBUL <i>Alophoixus finschii</i>	FERRUGINOUS BABBLER <i>Trichastoma bicolor</i>
OCHRACEOUS BULBUL <i>Alophoixus ochraceus</i>	SHORT-TAILED BABBLER <i>Malaccocincla malaccensis</i>
GREY-CHEEKED BULBUL <i>Alophoixus bres</i>	TEMMINCK'S BABBLER <i>Pellorneum pyrrogenys</i>
HAIRY-BACKED BULBUL <i>Tricholestes criniger</i>	BLACK-CAPPED BABBLER <i>Pellorneum capistratum</i>
BUFF-VENTED BULBUL <i>Iole olivacea</i>	SOOTY-CAPPED BABBLER <i>Malacopteron affine</i>
STREAKED BULBUL <i>Ixos malaccensis</i>	SCALY-CROWNED BABBLER <i>Malacopteron cinereum</i>
*CINEREOUS BULBUL <i>Hemixos cinereus</i>	RUFIOUS-CROWNED BABBLER <i>Malacopteron magnum</i>
GREATER GREEN LEAFBIRD <i>Chloropsis sonnerati</i>	CHESTNUT-BACKED SCIMITAR BABBLER <i>Pomatorhinus montanus</i>
LESSER GREEN LEAFBIRD <i>Chloropsis cyanopogon</i>	GREY-THROATED BABBLER <i>Stachyris nigriceps</i>
BLUE-WINGED LEAFBIRD <i>Chloropsis cochinchinensis</i>	GREY-HEADED BABBLER <i>Stachyris poliocephala</i>
*BORNEAN LEAFBIRD <i>Chloropsis kinabaluensis</i>	CHESTNUT-WINGED BABBLER <i>Stachyris erythroptera</i>
*BORNEAN WHISTLING THRUSH <i>Myophonus borneensis</i>	*BOLD-STRIPED TIT BABBLER <i>Macronous bornensis</i>
WHITE-BROWED SHORTWING <i>Brachypteryx montana</i>	FLUFFY-BACKED TIT BABBLER <i>Macronous ptilosus</i>
YELLOW-BELLIED PRINIA <i>Prinia flaviventris</i>	*BLYTH'S SHRIKE BABBLER <i>Pteruthius aeralatus</i>
BORNEAN STUBTAIL <i>Urosphena whiteheadi</i>	CHESTNUT-CRESTED YUHINA <i>Yuhina everetti</i>
SUNDA BUSH WARBLER <i>Cettia vulcania</i>	GOLDEN-BELLIED GERYGONE <i>Gerygone sulphurea</i>
MOUNTAIN TAILORBIRD <i>Orthotomus cuculatus</i>	RUBY-CHEEKED SUNBIRD <i>Chalcoparia singalensis</i>
DARK-NECKED TAILORBIRD <i>Orthotomus atrogularis</i>	PLAIN SUNBIRD <i>Anthreptes simplex</i>

Common name / Scientific name	Common name / Scientific name
OLIVE-BACKED SUNBIRD <i>Cinnyris jugularis</i>	RUFOUS-WINGED PHILENTOMA <i>Philentoma pyrhoptrum</i>
TEMMINCK'S SUNBIRD <i>Aethopyga temminckii</i>	ASHY DRONGO <i>Dicrurus leucophaeus</i>
LITTLE SPIDERHUNTER <i>Arachnothera longirostra</i>	BRONZED DRONGO <i>Dicrurus aeneus</i>
*STREAKY-BREASTED SPIDERHUNTER <i>Arachnothera affinis everetti</i>	HAIR-CRESTED DRONGO <i>Dicrurus hottentottus</i>
GREY-BREASTED SPIDERHUNTER <i>Arachnothera modesta</i>	GREATER RACKET-TAILED DRONGO <i>Dicrurus paradiseus</i>
YELLOW-RUMPED FLOWERPECKER <i>Prionochilus xanthopygius</i>	WHITE-BREASTED WOODSWALLOW <i>Artamus leucorhynchus</i>
ORANGE-BELLIED FLOWERPECKER <i>Dicaeum trigonostigma</i>	CRESTED JAY <i>Platylophus galericulatus</i>
BLACK-SIDED FLOWERPECKER <i>Dicaeum monticolum</i>	SHORT-TAILED MAGPIE <i>Cissa thalassina</i>
BLACK-CAPPED WHITE-EYE <i>Zosterops atricapillus</i>	BORNEAN TREEPIE <i>Dendrocitta cinerascens</i>
PYGMY IBON <i>Oculocincta squamifrons</i>	SLENDER-BILLED CROW <i>Corvus enca</i>
BLACK-AND-CRIMSON ORIOLE <i>Oriolus cruentus</i>	COMMON HILL MYNA <i>Gracula religiosa</i>
LARGE WOODSHRIKE <i>Tephrodomis gularis</i>	DUSKY MUNIA <i>Lonchura fuscans</i>